

Patent claims

- 5 1. Device for guiding two sub assemblies of a motor vehicle which are displaceable relative to one another, more particularly of a motor vehicle seat, along a guide direction with
- 10 - two guide elements which are spaced from one another in a transverse direction perpendicular to the guide direction and
- two guide devices in which each one of the guide elements is mounted movable along the guide direction
- 15 wherein the guide elements and/or the guide devices are coupled to one another and stops are associated with the guide elements on the guide devices to restrict movement of the guide elements relative to the relevant guide devices along the transverse direction perpendicular to the guide direction,
- 20 **characterised in that**
- a first of the two guide elements (1, 2) is mounted in the associated guide device (3) with such small displacement margin perpendicular to the guide direction (R) that a relative movement of the guide element (1) and the
- 25 associated guide device (3) is possible in the guide direction (R) and a substantial relative movement is prevented along the transverse direction (Q), and that the second guide element (2) is mounted with greater displacement margin along the transverse direction (Q) in the associated guide device (4).
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2. Device according to claim 1, **characterised in that** the displacement margin with which the second guide element (2) is mounted is so great that under the action of forces along the transverse direction (Q) the first guide element (1)
- 35 can move into engagement with a stop (31, 32) of the associated guide device

(3) without the second guide element (2) moving into engagement with a stop (41, 42) of the associated guide device (4).

5 3. Device according to claim 1 or 2 **characterised in that** the bearing play along the transverse direction (Q) with which the first guide element (1) is mounted in the associated guide device (3) is smaller than the bearing play with which the second guide element (2) is mounted in the associated guide device (4).

10 4. Device according to one of the preceding claims **characterised in that** the elasticity along the transverse direction (Q) with which the first guide element (1) is mounted in the associated guide device (3) is less than the elasticity with which the second guide element (2) is mounted in the associated guide device
15 (4).

20 5. Device according to one of the preceding claims **characterised in that** the guide devices (3, 4) form a longitudinal guide on which the guide elements (1, 2) are guided as sliding guide elements.

25 6. Device according to one of claims 1 to 4 **characterised in that** the guide devices (3, 4) form a rotary bearing in which the guide elements (1, 2) are guided as swivel elements.

30 7. Device according to one of the preceding claims **characterised in that** at least one of the guide elements (1, 2) interacts with the associated guide device (3, 4) along the transverse direction (Q) through elastic means (16, 17; 26, 27).

35 8. Device according to claim 7 **characterised in that** the two guide elements (1, 2) each interact with their associated guide device (3, 4) along the transverse direction (Q) through elastic means (16, 17; 26, 27).

9. Device according to claim 7 or 8 **characterised in that** the relevant guide element (1, 2) can move along the transverse direction (Q) into engagement with the associated guide device (3, 4) through the elastic means (16, 17; 26, 27).
10. Device according to claim 8 or claim 8 and 9 **characterised in that** the elastic means (16, 17) which act between the first guide element (1) of the associated guide device (3) have a greater stiffness than the elastic means (26, 27) which act between the second guide element (2) and the associated guide device (4).
11. Device according to one of claims 8 to 10 **characterised in that** the elastic means (16, 17) which act between the first guide element (1) and the associated guide device (3) have a smaller maximum still available spring path in the transverse direction (Q) than the elastic means (26, 27) which act between the second guide element (2) and the associated guide device (4).
12. Device according to one of claims 8 to 11 **characterised in that** the elastic means (16, 17) which act between the first spring element (1) and the associated guide device (3) in the transverse direction (Q) have in comparison with the spring elastic means (26, 27) which act between the second guide element (2) and the associated guide device (4) in the transverse direction (Q) such a greater stiffness and/or such a smaller maximum still available spring path that the first-mentioned elastic means (16, 17) under a predeterminable load in the transverse direction (Q) prevent a complete run through of the spring path of the second-mentioned elastic means (26, 27).
13. Device according to claim 12 **characterised in that** the predeterminable load represents the loads which occur during accident-free operation of the motor vehicle.

14. Device according to one of claims 7 to 13 **characterised in that** the spring elastic means (16, 17; 26, 27) are formed in one piece on the relevant guide element (1, 2) and preferably consist of a plastics, more particularly an elastomer.
15. Device according to one of claims 7 to 13 **characterised in that** the elastic means (16, 17; 26, 27) are mounted as separate elements on the relevant guide element (1, 2) and are supported on this.
16. Device according to one of claims 7 to 15 **characterised in that** the elastic means (16, 17; 26, 27) are formed by spring tongues or spring eyelets.
17. Device according to one of claims 7 to 16 **characterised in that** on the first guide element (1) stops (11a) are provided more particularly in the form of slide feet which in the transverse direction (Q) and in relation to the associated stop face (31) of the guide device (3) are set back from the outer contour of the elastic means (16) there of the first guide element (1).
18. Device according to one of the preceding claims **characterised in that** the guide elements (1, 2) are designed in several parts, more particularly two parts.
19. Device according to claim 18 **characterised in that** the two parts (11, 12, 21, 22) of the relevant guide element (1, 2) are accessible through a guide opening (30, 40) of the relevant guide (3, 4) and can be connected to one another through same.

20. Device according to claim 19 **characterised in that** the connection of the two parts (11, 12; 21, 22) of the relevant guide element (1, 2) is through clip elements (18, 19; 28, 29) and /or through a threaded bolt (15, 25).

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21. Device according to one of claims 18 to 20 **characterised in that** the two parts (11, 12) of the first guide element (1) are tensioned towards each other so that no substantial spring path becomes available for further deformation of the elastic means (16, 17) acting in the transverse direction (Q) on the corresponding guide element (1),.

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22. Device according to one of claims 1 to 13 or one of claims 16 to 20 **characterised in that** at least one part of the elastic means (17) which act in the transverse direction (Q) on the first guide element (1) are formed by the use of an elastic material for the first guide element (1).

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23. Device according to one of the preceding claims **characterised in that** between the first guide element (1) and/or the second guide element (2) on the one hand and each relative guide device (3, 4) on the other elastic means act in a direction both perpendicular to the guide direction (R) and to the transverse direction (Q).

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24. Seat frame with a device for guiding two seat sub assemblies of a motor vehicle which are displaceable relative to each other according to one of the preceding claims.

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25. Motor vehicle seat with a seat frame according to claim 24.